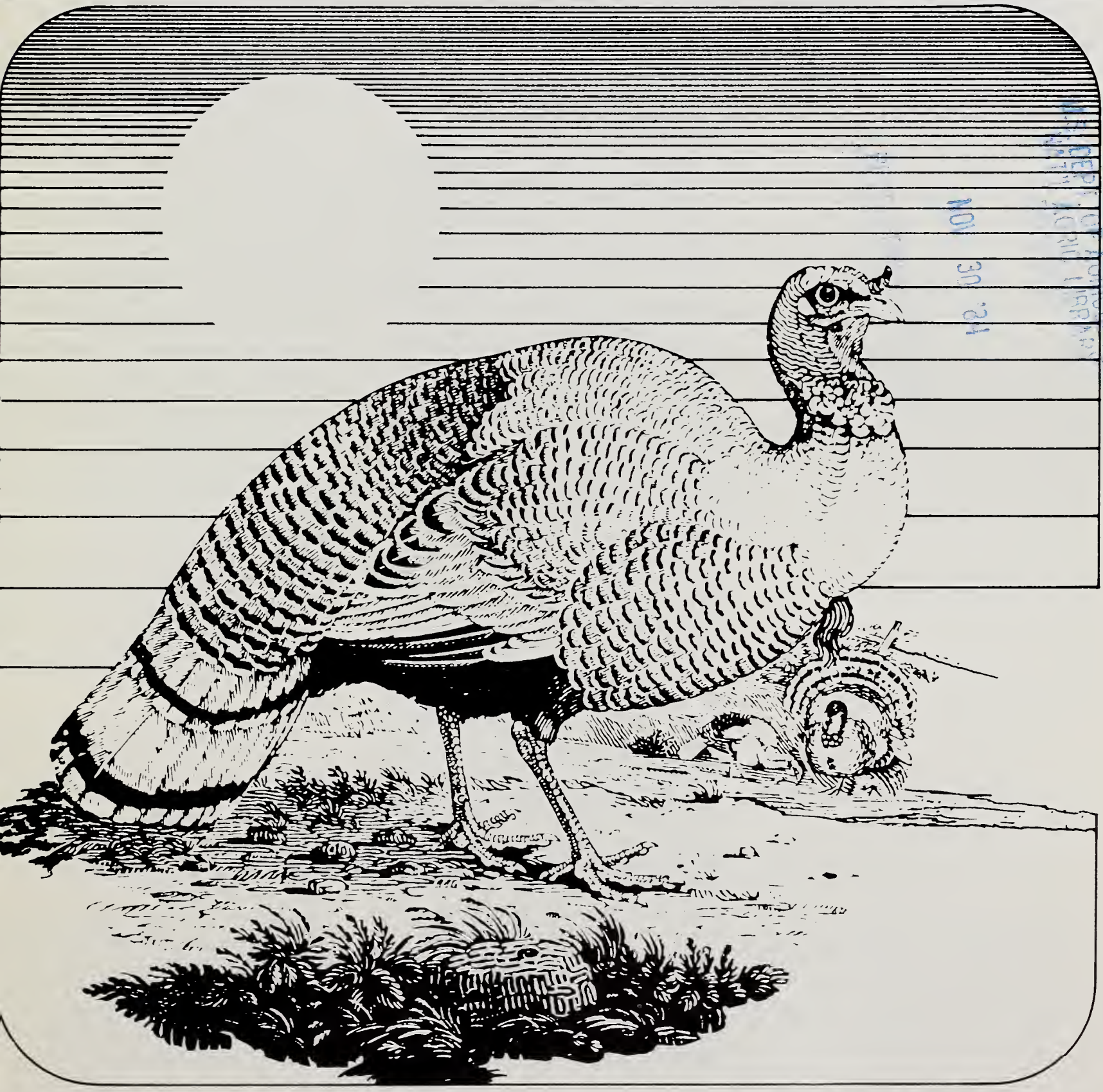
FARM INDEX

U.S. Department of Agriculture

November 1976



Outlook

At press time, ERS economists were dotting the "i's" and crossing the "t's" on the final story for U.S. agriculture 1976. The first draft contained these highlights:

Total net farm income for 1976 will fall a step behind 1975's $26 billion if cattle numbers decline at the current rate and if crop output fails to measure up. However, when farmers' prosperity is figured by netting out inventory changes, they are doing a bit better than last year in realized net farm income.

Speaking of crops, so far so good. The October 12 crop report, based on October 1 conditions, confirmed the previous report—that U.S. corn production is heading for a new high...wheat production is the second largest in history...soybeans won't top the 1975/76 mark but they'll outdo the 1974/75 crop, one of the biggest on record.

Retail food prices for the entire year should average around 3 percent above 1975, again, the same story economists have been telling for many months. That would be the slowest creep in 5 years.

All in all, farmers will remember 1976 as not the best and not the worst of years, but they should be reasonably satisfied. Consumers can say the same. Rising food prices at the retail level are a source of constant complaint, although consumers should realize that it's the marketers rather than the farmers who have pushed up the retail prices this year. The marketers counter that their costs have been rising—labor, tranportation, and packaging, especially.

Moving to 1977—risky at this stage, but economists are paid to make such forecasts. First, for the consumer, ERS analysts see retail food prices rising 2 to 4 percent in the first half of 1977 versus the same period of 1976. However, you can expect that much of the growth will come in the spring: Food prices could gain on a broad front, led mainly by red meat, poultry, and fresh products.

For the livestock growers, ERS believes that livestock supplies will be plentiful into 1977, based on key indicators of cattle on feed, pig crops, and the broiler hatch. Though beef production will probably dip below year-earlier levels by early 1977, pork and broilers will more than take up the slack. But year-to-year increases for total meat production might narrow in the first quarter of the new year. Milk and egg production expansion is expected to continue in early 1977.

For the grain grower, ERS sees tighter supplies and a mixed outlook for prices. Despite the large grain harvest, foreign buyers of U.S. grains remain active bidders for our supplies. Farm prices in 1976/77 will average much higher for soybeans. Cotton prices are well above last year, about the same for corn, and lower for wheat, although the recently boosted loan rates will provide some cushion.

A footnote on exports: Grain prospects in the U.S.S.R. have improved greatly in recent weeks. However, the Soviets are still pushing to rebuild depleted stocks. And Europe's crop continues to deteriorate, so bigger demand from the Europeans will offset Russia's hunger for our grains.

On balance, U.S. farm exports in fiscal 1977 will be just that: little different from the $22.15 billion shipped in fiscal 1976. Export volume will droop—reflecting generally improved crops around the world—but prices are seen stronger for soybeans, natural fibers, and oilmeal.

Contents

Features

Departments

Daniel R. Williamson, Acting Editor
Dorothy Mayes, Associate Editor; Martha Newton, Jerry Casbolt, Staff Editors; Martin Schubkegel, Contributing Editor; James Schleyer, Art Director.

The Farm Index is published monthly by the Economic Research Service, U.S. Department of Agriculture. November 1976. Vol. XV. No. 11

Readers are invited to write for the research materials on which we base our articles. Address queries to The Farm Index, Rm. 1664, Economic Research Service, U.S. Department of Agriculture, Wash., D.C. 20250. Please cite article titles when ordering.

Consumer Concerns Affect Food Purchases

What are consumers' behavior, attitudes, and motives toward food? Results from the first part of a nationwide ERS survey are highlighted in the following 6-page section.

Today's consumers are better informed and more demanding than at any other time in history. No longer willing to sit back and let others have all the say in the policies and programs which will affect their lives, they are requesting—and gaining—a bigger role.

All Federal Departments and Agencies now have consumer representation plans, designed to make the Government more effective and responsive to the public. USDA's plan is structured "to insure that each agency within the Department proceeds in an organized and systematic manner to meet the consumer's desire to be better informed about, and more involved in, the agencies' decisionmaking process."

National survey. As a means of gauging how consumer concerns affect food purchases, ERS designed a two-part national survey to assess consumers' behavior, attitudes, and motives toward food.

The first phase of the survey was carried out this spring and covered such topics as household energy use, food and household health status, food shopping patterns, labeling information, open dating and unit pricing, away-from-home eating, and home canning.

Results from the first phase are based on more than 1,400 personal, in-home interviews with respondents who were the main food shoppers or who had the major responsibility for food purchasing decisions within their households at the time of the interview.

Selection of respondents. Selection of respondents was based on probability sampling procedures and represented a cross section of private households throughout the 48 contiguous States. Almost 90 percent of those surveyed were women. Other respondent characteristics were:

- Half were employed some time in 1975, while 40 percent were working at the time of the interviews.
- Almost a fourth were the chief wage earner in their households.
- Nearly 40 percent were high school graduates, with another 30 percent having some higher education.
- About 60 percent were under 50 years old.

The second phase of the survey will be conducted this winter. Possible topics to be covered include large-volume beef purchasing practices; purchase, use, and satisfaction with vegetable protein analogs; and types of foods and motives for preparing from scratch.

Tighter Food Budgets Change Shopping Patterns

Consumers have felt the brunt of escalating food costs in recent years, but have they reacted by becoming better food shoppers?

According to the ERS survey, the answer is yes—many consumers are making more careful food-purchasing decisions.

For example, 30 percent of those surveyed said that they were checking the newspaper ads for food specials more than they were in the previous year. These food shoppers were more likely to have children. On the other hand, 16 percent declared that they never check the ads for specials.

Food coupons. Many consumers—almost 30 percent—were saving and using food coupons more than in 1975. They tended to be younger, have higher education levels, larger family incomes, and more household members. However, nearly a fourth of them never use this money-saving device.

Buying food in volume—especially when it's being sold at special rates—is another way to stretch the food dollar. Over a fourth of the respondents were doing this more than they had the year before. The characteristics of these food shoppers were the same as for those who saved and used food coupons.

Survey participants who said they never buy food in volume—20 percent—were more likely to live in large metropolitan areas and to have fewer household members.

Food from scratch. Some consumers believe that preparing food from scratch is a good way to keep the food budget balanced. More than a fifth of those surveyed said that they were making more dishes from scratch than they had the previous year. About two-thirds of these food shoppers indicated that they were preparing more foods this way because it was cheaper or to save money. Nutrition and better taste were other reasons.

Respondents who prepared more foods from scratch were generally from households with children and with lower per capita and total family incomes. As their educational level increased, they were less likely to prepare food from scratch.

Economy-minded consumers. Although half or more of those interviewed didn't increase each of these food shopping patterns—checking the papers for specials, saving and using food coupons, buying food in volume, and preparing food from scratch—from the year before, there was enough change to indicate that many consumers are becoming more economy-minded.

Their economy-mindedness has also carried over to the area of higher gasoline prices, which has affected the food shopping patterns of some consumers. For example, about a sixth of the survey respondents were shopping close to home more often than they had in 1975. More than a third of these food shoppers specifically mentioned gasoline costs or interest in gasoline conservation as the reason.

Less trips to food store. By the same token, more than a tenth of the food shoppers claimed to be making less trips to the food store at the time of the interview than they had the previous year. To save gasoline was one of the reasons given.

Higher food costs have changed the makeup of many food shopping lists. For example, more than three-fifths of the survey participants were buying less of some types of food than they had in 1975 because of higher food prices, while about a fourth were purchasing more of certain lower priced items. These respondents were typically younger, from larger households, and with lower per capita and total family incomes.

Less costly food items. Costly food items that were cut back on were beef (particularly steaks and roasts), mentioned by about 60 percent of those interviewed; pork (chops, bacon, and ham), 50 percent; snack foods, 30 percent; and fresh fruits and vegetables, dairy products, convenience foods, soft drinks, fish, lamb, veal, and canned fruits and vegetables, 10 percent.

Foods that were being purchased more by budget-conscious consumers were hamburger, mentioned by about 30 percent of the respondents; poultry, 25 percent; pastas, 20 percent; and fresh fruits and vegetables, 15 percent.

Other conclusions. The survey also found that the majority of the participants:

- Did their main food shopping once a week and at only one store.
- Overwhelmingly preferred supermarkets.
- Patronized stores close to home.

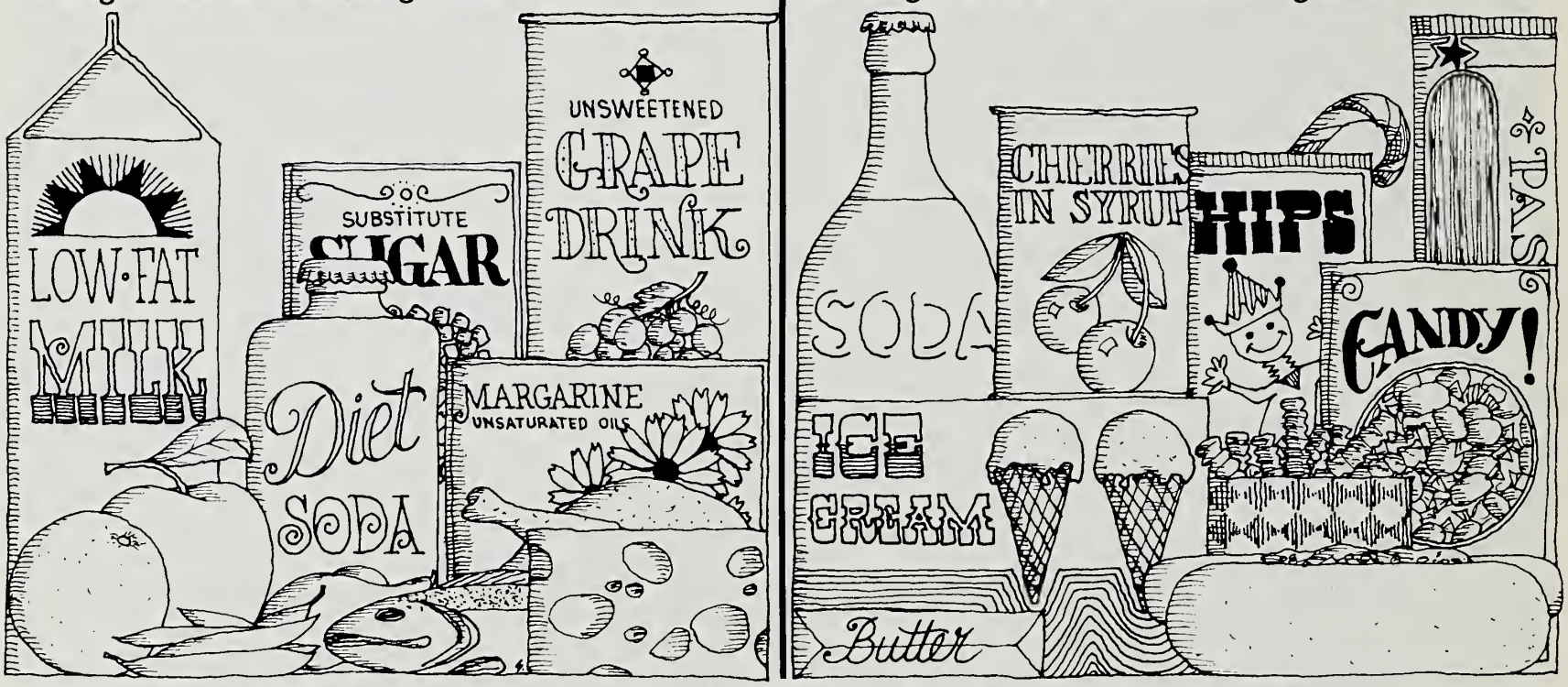
[Based on special material from Evelyn F. Kaitz, National Economic Analysis Division.]

Consumers Change Diets For Health Purposes

Households that have or want to prevent health problems are:

Adding to their diets or eating more...

Leaving out of their diets or eating less...



The items illustrated are a partial listing and do not reflect the order of frequency with which they were cited in the survey.

Just how important is the daily diet to today's food- and health-conscious consumers?

According to the ERS survey, it's of prime concern to a large number of people who are worried about dealing with or preventing health problems.

Nearly two-thirds of the respondents said that at the time of the interview, they, or someone in their household, suffered from some type of ailment—overweight, high blood pressure, and allergy problems were the most common. Many of these people—about 40 percent—had changed their diet as a result.

In addition, almost a fourth of those interviewed said that they, or someone in their household, were now eating and drinking different foods and beverages in order to prevent a health problem from developing.

Changes in diet. Changes in diet for health purposes were made most frequently by persons in larger and higher income households. "Preventive" households were also more likely to be from metropolitan areas and to have main food shoppers with higher education levels.

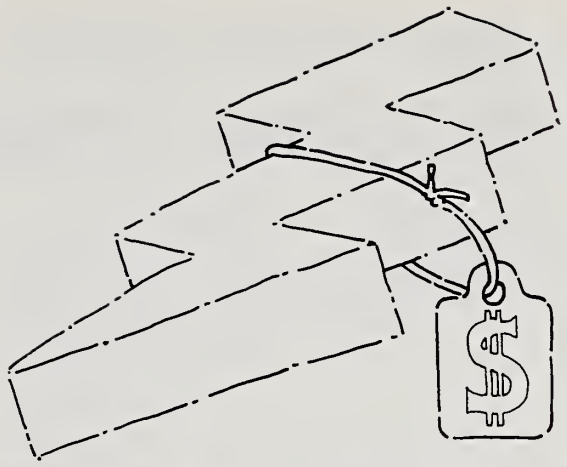
Both the current-health-problem and preventive households appeared to be cutting down on items high in saturated fats and oils, and replacing them with other products. For example, the survey indicates that fish, poultry, and lean red meat were possibly being substituted for fatty red meat; unsaturated margarine for butter; and unsweetened or artificially sweetened foods and drinks for sugar-sweetened items.

Special information. Slightly over 40 percent of the households with current health problems and 25 percent of the households that wanted to prevent health problems looked for special information on the labels of food and beverage products. Both groups worried about the number of calories, the amount of fat, saturated versus unsaturated fats, and the presence of sugar.

The preventive households appeared to be somewhat more concerned about the presence of preservatives, artificial sweeteners and food colorings, monosodium glutamate, and nitrites in foods and beverages.

[Based on special material by Jon P. Weimer, National Economic Analysis Division.]

High Prices Reduce Household Energy Use



With household energy expenditures doubling between 1970 and 1974, many consumers became acutely aware of ways to save energy in the home. In fact, during this 4-year period, energy use per household fell about 9 percent.

Although higher energy costs have caused several changes within the home, most of them have been outside the kitchen and laundry areas. The ERS survey found that in 1975, slightly more than half the households reduced home lighting, and nearly an equal proportion reduced home heating compared with 1974.

About one-fifth of all households, or two-fifths of those with air conditioners, cut back on air conditioning, while nearly a tenth reduced the use of televisions, radios, and other electrically powered recreational items. These adjustments were made more frequently by the younger and higher income households.

Changes in the kitchen. Some changes have occurred within the kitchen because of higher energy prices. For example, in 1975, 17 percent of all survey households used their ovens less than the previous year; 11 percent of all households, or about one-third of those having dishwashers, cut back the use of dishwashers; 8 percent, specialty cooking appliances; and 6 percent, stovetop cooking. Cooking adjustments were more common among younger and lower income households.

Almost a tenth of those surveyed conserved energy in the kitchen by cooking more food in the oven at one time. Others used electric crocks and other specialty cooking appliances or bought more food that required little or no cooking at home. A few ate out more often or used an outside grill.

Respondent characteristics. Those who chipped away at energy expenditures by adjusting their food purchases tended to be younger and in lower income categories, while, not surprisingly, respondents who ate out to conserve energy usually had higher incomes and were more frequently employed.

Clothes laundering has also been affected by higher energy prices. In 1975, 16 percent of all survey households used clothes dryers less than in 1974. Temperature settings on hot water heaters were also reduced in 14 percent of the homes, raising a question about the sanitation of both the clothes and the dishes washed in some of these homes. Energy adjustments in the laundry area were made most frequently by larger households.

Rising energy prices. If household energy expenditures were to rise 25 percent, reductions in lighting and heating would still be the most common way of conserving energy, although fewer respondents said they would do this than in 1975. On the other hand, compared with 1975, twice as many households would reduce the use of televisions and other recreational items.

Compared with 1975, adjustments in the kitchen to higher energy prices would change most in the area of specialty cooking appliances—twice as many people in the survey said they would cut back their use. Reductions in oven and stovetop cooking would be about the same.

The elderly and the poor. Even if household energy prices continue to rise, the elderly and the poor won't be able to do much to conserve. Older people have less flexible lifestyles, and because much of their time is spent at home, reducing energy use has a more direct impact on their satisfaction. Low-income families usually have smaller living areas and fewer appliances, which limits their opportunity to conserve energy.

[Based on special material from Richard B. Smith and Susan E. Cobb, National Economic Analysis Division]

Energy: Low Priority of Appliance Purchaser

Soaring energy costs have spurred some consumers to cut back the use of their kitchen appliances. However, few are concerned about energy cost or use when considering the purchase of a major new appliance.

According to the ERS survey, consumers were much more interested in the price, size, brand, style, or other features, and warranty. Even the availability of maintenance service and type of energy used were as important to prospective buyers as energy cost or use.

Respondents with higher educations were more interested in the energy aspects than those with less education. Others who were less concerned about energy use or cost were from single-member households, from the South, and the elderly.

Rural respondents were more frequently concerned about the type of energy a new appliance would use, perhaps because few rural residents have access to natural gas. Alternatives such as LP gas and electricity are generally more expensive.

Label Information Helps Food Shoppers

Most consumers feel that label information helps in food shopping, although some information items among nine types rated in an ERS survey appear to be more useful than others.

Prices and open dates on food packages were rated very useful by the largest number of food shoppers—90 percent. It's not surprising that so many feel that way about prices since about 70 percent always or almost always compare prices on food products when they go shopping.

Also, most respondents have to keep within a food budget, indicating that shoppers should be interested in the price on the package as an aid in food purchasing decisions.

Confusing labels. Not all label information is useful. In fact, consumers have found some package labels to be downright confusing, such as the hundreds of different names for meat cuts. This problem was partly alleviated in 1973 when the supermarket industry and the National Livestock and Meat Board voluntarily reduced the names of beef, pork, and lamb cuts from about 1,000 to 300. In cooperating supermarkets, package labels indicate from where on the carcass each particular meat cut comes.

The survey didn't ask how many of the food shoppers were aware of the reduction of names, or how many considered this a potential shopping aid that wasn't currently available. However, about 70 percent felt that uniform names and descriptions of meat cuts are or might be very useful.

Full-time employees. Slightly fewer shoppers—about 65 percent—believed ingredient information and storage instructions were very useful. Shoppers with full-time jobs were less likely to find ingredient disclosure extremely useful than those who were not employed, perhaps because they have less time to read labels when food shopping.

Half the respondents always or almost always read the ingredients on the label the first time they buy a food product. There was also an interest in ingredient information among some shoppers who had a household member who was either trying to alleviate or prevent a health problem.

Older consumers were less likely to feel that storage information was very useful, perhaps because they have been buying food for many years and don't believe they need this additional information.

More than half. Names of the food manufacturer, nutrition information, and unit pricing were considered very useful by a little more than half of those surveyed.

Nutrition information on packaged food labels can be used as an aid in planning well-balanced meals. Unfortunately, only a fourth of the respondents always or almost always plan menus before doing food shopping. Ironically, the population segments that need nutrition information most were less likely to find it useful—those with lesser education, lower total family incomes, and the elderly.

The drained weight of canned foods packed in liquids was considered very useful by only 30 percent of the shoppers.

[Based on special material from Evelyn F. Kaitz, National Economic Analysis Division.]

Some Open Dates Confuse Consumers

Although most survey participants considered open dates on food packages very useful, many were confused about what the dates mean.

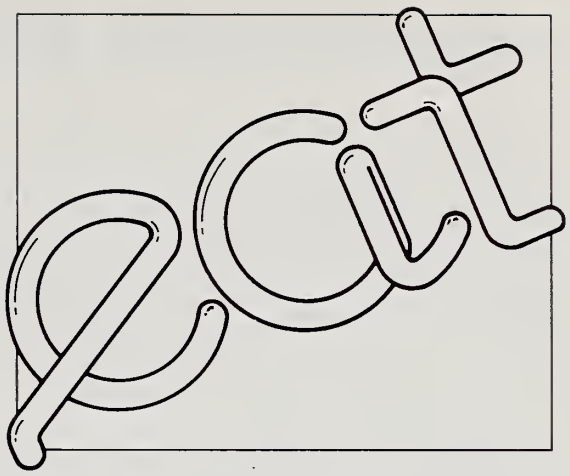
For example, "packed on" (the date of manufacturing, processing, or final packaging) and "sell by" (the pull date—the last day a retail store may offer the food for sale, allowing the consumer a reasonable amount of time to store and use the product in the home, even if bought on this date) were correctly interpreted by most food shoppers.

On the other hand, "EXP" (the date which marks either the end of the product's useful life or the last day it should be used) and "use by" (the date after which the peak quality of the food product begins to lessen, but the product may still be used) were misinterpreted.

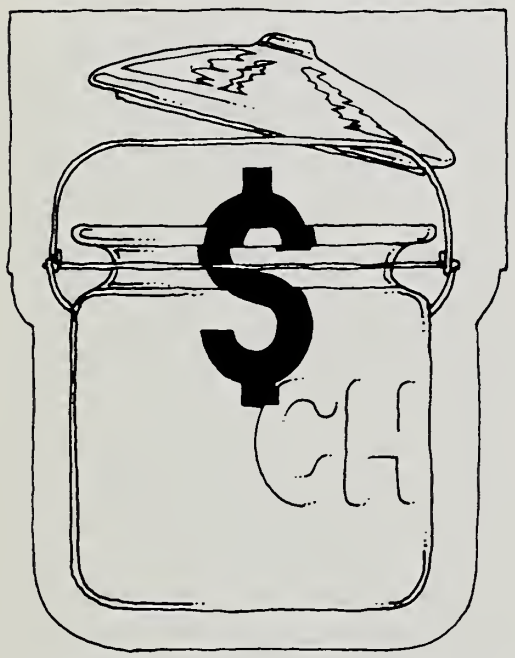
Probably the most serious misconceptions were that the open dates represent the last day a food item should be used, and that food is unsafe to eat afterwards. About a third of the food shoppers who looked for open dates have thrown out food because of the date. These were items such as dairy and meat products which usually carry a pull date and are good much longer than the date indicated if handled properly.

Despite the confusion, virtually all of the participants look for open dates always or some of the time on some food products.

[Based on special material from Charlene C. Price, National Economic Analysis Division.]



Canning: Economy and Safety



Canners who do not rely on authoritative instructions may be flirting with economic and health problems.

The USDA survey revealed that one out of three households canned fruits and vegetables at home in 1975. Less than half of those who canned followed the most reliable instructions.

Considering the survey replies, it's obvious some mistakes are being made. Here are some common errors:

- About a third of the canning households used jars that were not meant for the job, contrary to instructions.
- Most canners used two-piece lids with new, flat-metal disks. But 1 in 10 canners reused old disks—a practice USDA cautions against.
- While the open-kettle method of canning is meant to be used only for jellies and as an initial step in preparing jams, about half of the surveyed households used this method to can fruits and pickles, too.

Telltale signs. Most home canners recognized spoilage when they saw it. Bulging lids, off odor, spurting liquids when a container is opened, leaks, and mold were listed as telltale signs. However, 40 percent of the canners surveyed thought that there would always be visible signs of food spoilage. This is not the case, because invisible botulinum toxin—which can be fatal—may be found in improperly canned products without such signs.

Food spoilage in home-canned foods was reported in about a fourth of the households that canned. Although the survey did not determine the actual causes of spoilage, three-quarters of these canners thought the spoilage was due to lids that sealed improperly.

About half of the home canners found some jars not properly sealed the day after canning. One-third discarded the food; one-fourth recanned the item; and 60 percent used the food immediately.

Recommendations. Throwing the food out is usually not necessary if the canner follows USDA recommendations to recan food or use it immediately.

When serving canned vegetables, USDA further recommends they be boiled covered for 10 minutes first. About 50 percent of home canning households did this.

Home canners need to be cautioned to follow reliable instructions such as those found in USDA home canning publications.

[Based on special material from Carole A. Davis, Agricultural Research Service.]

Fast Food Outlets: Most Popular Eateries

When Americans eat out, they're likely to head for a convenient and inexpensive fast food restaurant.

Better than 7 out of the 10 of those responding to the ERS survey said that at least one family member bought food there last year.

Household members ate there far more often than other types of restaurants. A third of the fast-food purchasing household respondents reported that someone in the family ate there at least once a week, and another fourth reported a frequency of two or three times a month.

The quick-service, low-priced food outlets aren't the only popular eateries, however. Sixty percent of the respondents said someone in the family bought food at a restaurant that offered a main course for less than $5, and nearly half said someone in the family had patronized a restaurant offering a main course costing more than $5.

What determines where families will go out to eat? Income seems to be a major factor. However, there are no hard and fast dividing lines—all income level households show some amount of purchases in all types of restaurants.

Still, fast food patrons are most likely to come from families that have a per capita income of $4,000 to $7,000.

[Based on special material from Jon P. Weimer and Evelyn F. Kaitz, National Economic Analysis Division.]

Growing with Energy

Fruit and vegetable growers should be able to weather the storm of another energy crisis—should one arise.

Although fruits and vegetables use more energy per acre than do other crops, they are also worth more per acre. The high cost of the energy, then, is usually offset by the high value of the commodity.

Citrus fruits are the most notable exception. They use huge amounts of energy, costing $284 per acre, according to a recent study, compared with an average of $17 per acre for all crops.

Fruits generally are energy intensive, using twice as much energy per acre as vegetables—27 million BTU's compared with 13.6 million for vegetables. The average for all crops is 5.3 million BTU's.

Heavy energy use. The heavy energy use for fruits and vegetables is due to heavy fertilizer and chemical use; extensive ground preparation, cultivation, and irrigation; and the need for frost protection, particularly in citrus. Citrus growers use heat machines to stave off the effect of the frost on citrus groves. Frost protection for citrus amounts to 60 percent of all energy used for that crop, and for 45 percent of the energy used for all fruit crops.

However, when the cost of BTU's used is compared with the dollar value of the crop, growing most fruits and vegetables appears to be a relative bargain. For example, fresh vegetables consume only about 12,400 BTU's per dollar of farm value—so that a crop worth $1,000 to the farmer would have used 12.4 million BTU's production. This is compared with cotton, which uses more than 57,000 BTU's per dollar.

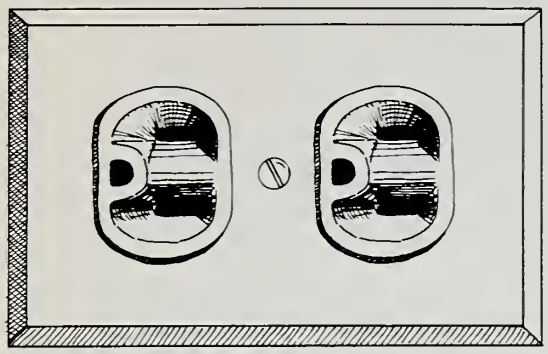
Energy-expensive citrus. Citrus, again, is the exception among fruits. Citrus uses nearly 59,000 BTU's per dollar of farm value, making citrus the most energy-expensive of crops. More than 19 cents for every dollar of citrus farm value is spent on energy—a $1,000 citrus crop may cost the farmer $190 in energy. Energy costs for all fruits average 10.8 cents of each dollar.

When nonmonetary factors are considered, fruits and vegetables are relatively energy-inefficient crops. They have a fairly low energy output-to-input ratio, when compared with most field crops. They take in far more energy than they provide in food calories. Some crops are more efficient at amplifying the amount of energy added by man—by converting factors such as sunlight to energy—than others are. Most crops show a net energy loss, a few show a gain. A ratio figure below 1 indicates a loss, and above 1 shows a gain. Barley has the highest gain, with a ratio of 6.609—it gives off 6 times as much energy as is fed into it by the farmer.

Low ratio. Citrus, as might be expected, has one of the lowest ratios for all crops. Oranges have a ratio of .425, which means that twice as much energy is used in producing oranges as is received in the oranges harvested.

Most fruits and vegetables have a fairly low ratio.

This information can be applied to these hypothetical events:



1. Energy prices continue their sharp increase, say, at the rate of 10-20 percent yearly.

2. Another energy shortage situation occurs, caused perhaps by political problems or by the reduced supply of fossil fuels, without a corresponding increase in alternative energy sources.

Field crops. In the first instance, producers of field crops could encounter more severe economic problems than producers of fruits and vegetables, in the absence of major shifts in relative price relationships. While field crops use less energy for their production, their value is less, thus the cost of energy is a greater percentage of their farm value. For example, cotton's farm value is more than 16 percent energy, and corn's is nearly 9 percent.

All vegetables, however, average only about 6 cents energy cost per dollar of farm value. A 10-percent fuel price increase would have less effect on fruit and vegetable growing than on field crops because energy value relative to total value is less in fruits and vegetables than it is in field crops.

Citrus an exception. Such is not the case with citrus, which has an energy value equal to 19 percent of the total farm value. Therefore, citrus growers would probably reduce the amount of fruit grown, according to the amount of the fuel price increase.

In the case of extreme energy shortages, citrus is about the only fruit that would be cut back significantly because of the lack of energy supplies. Large increases could occur in grains, because they have a higher energy output-to-input ratio than fruits and vegetables. Cost factors aside, it simply takes less energy to raise grains than most fruits.

Three reasons. Still, there are three reasons to expect that fruit and vegetable production wouldn't be severely curtailed, even in the event of extreme petroleum-product rationing:

1. Reduced demand for livestock feeds could prevent a shift to grains from fruits and vegetables. It takes a great deal of grain, thus a great deal of energy, to produce livestock for market. Therefore, livestock production could fall off with another energy shortage, and the demand for grains would fall off with it.

2. The energy efficiency of grains doesn't include the amount of energy needed for processing, which can be extensive. In contrast, fresh fruits and vegetables require very little processing, so fruit and vegetable energy efficiency appears greatly improved.

3. If livestock production is cut back and meat supplies for the consumer decrease, fruits and vegetables could be called upon to brighten up the dinner plate. Thus, an energy shortage could conceivably cause a greater demand for fruits and vegetables.

Another energy shortage. Of course, fruit and vegetable growing would certainly be affected by another energy shortage. Growers would be likely to shift away from citrus, turning toward other fruits or vegetables. Also, fruit and vegetable growing expenses would go up.

[Based on the paper, "Energy Inputs in U.S. Fruit and Vegetable Production: Relative Costs and Efficiencies," by Edward V. Jesse, Commodity Economics Division, presented at the ninth International Congress of NORCOFEL, Dijon, France, Nov. 3-5, 1976.]

ENERGY USED FOR FRUITS, VEGETABLES, AND SELECTED FIELD CROPS

Fruits and vegetables	BTU's per dollar of farm value	Energy costs per dollar of farm value
Citrus	58,800	19.0%
Noncitrus fruits	20,200	6.9%
All fruits	32,000	10.8%
Fresh vegetables	12,400	5.1%
Processed vegetables	28,600	9.4%
All vegetables	18,400	6.2%
Field crops		
Cotton	57,500	16.3%
Hay	36,700	13.5%
Rice	37,100	10.4%
Corn	30,600	8.9%
Soybeans	13,400	5.1%

All information is applicable to average 1968-72 yields in California. Data may vary in other states. Fruits and vegetables are treated as fresh market only.

Source: Cervinka, et al., "Energy Requirements for Agriculture in California," a joint study by the California Department of Food and Agriculture and the University of California - Davis, at Davis, California, January 1974.

That Seasonal Bird

Turkey and dressing are to Thanksgiving and Christmas what hobgoblins and pumpkins are to Halloween or bunnies and eggs are to Easter—virtually inseparable.

Although the turkey industry has been working hard to dispel the seasonal notion we Americans have toward its product—and succeeding a little—we still eat about half of our turkey in the last quarter of the year. And most of that coincides with the fourth Thursday of November and December 25.

And this year will certainly be no exception. With a record number of turkeys going to the block, the holiday bird will be in bountiful supply and at fairly attractive prices—a temptation too great to pass up for many Americans.

Heavy output. Output for the first half of this year alone was up over a fourth from the 1974 record, hitting 575 million pounds of ready-to-cook meat. Not only were more turkeys sent to market, but their average weights reached a new high too—almost 17½ pounds per bird.

Since over three-fourths of the turkeys slaughtered are immediately frozen, cold storage stocks are naturally rising with the increased output. Stocks have rebounded from being 80 million pounds below 1975 levels on January 1 to 31 million above in a span of 8 months—totaling over 360 million pounds by the first of September. And, with fourth quarter output running at around 6-8 percent above 1975's, there will be even more birds for the holidays.

Rising demand. Corresponding with the record high output is also a rising demand for turkey, both here and abroad.

Exports so far this year are at record levels: Through the first 8 months, the poundage was up two-thirds from a year ago, topping 41 million pounds. Our biggest customer was the European Community (EC-9), taking 56 percent of our turkey exports.

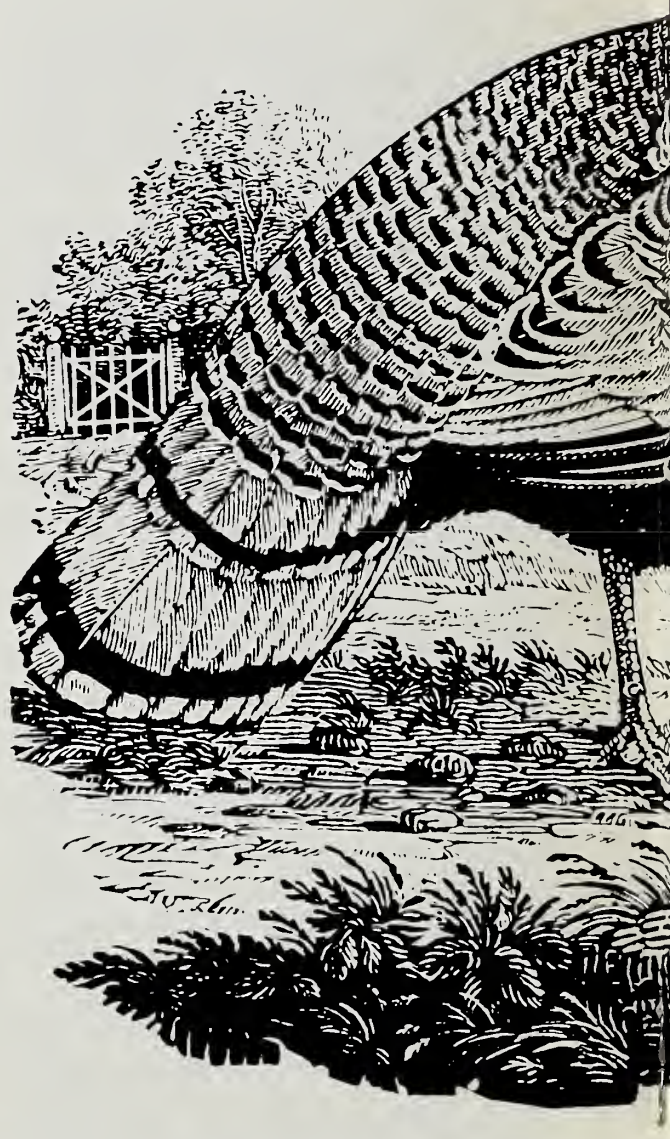
So what does all this have to do with the price tag on a turkey here at home? Good question, since economists have noted that the retail prices of turkeys don't react predictably to such normally strong indicators as supplies, consumer incomes, and prices of competing meats.

Holiday bargain. However, economists are betting that holiday prices will be below those of last year, about 6-8 cents a pound at the wholesale level. A word to the wise, though—wholesale prices are a far cry from those at retail, and often vary widely due to competition and bargain "specials," particularly during the holidays.

Speaking of competition, that other yuletide favorite and sometime Thanksgiving intruder—ham—will be a more attractive buy this year. With pork production up considerably, retail prices for pork will be lower than last year. And beef devotees may find their choice slightly cheaper than last year, too.

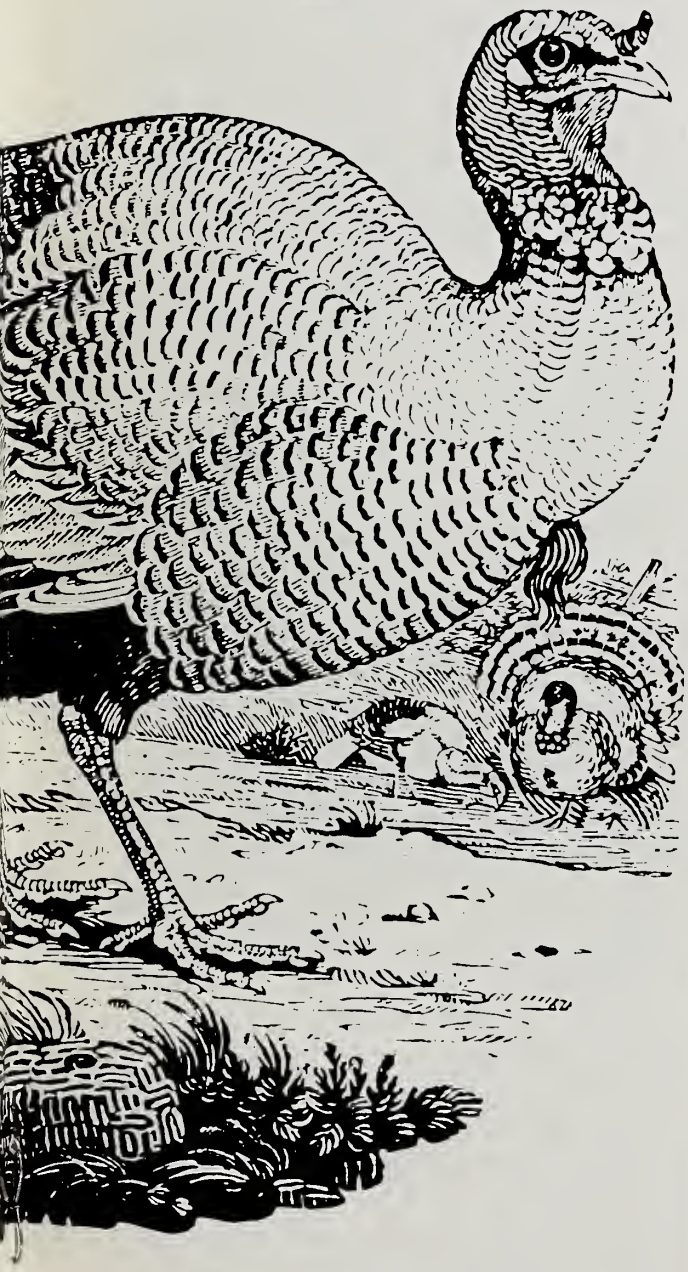
Gobbling more. If current trends hold, this year's per capita turkey consumption could match that of 1972's—an all-time high of a little over 9 pounds.

Over the long haul, turkey consumption has been on the increase. In



1940, an average person ate just short of 3 pounds of turkey, about a third of what he eats today. (Back then he also ate a lot less chicken, but more other fowl.) Even as late as 1960, per capita consumption was only two-thirds of what it is today.

Reflecting today's tastes, only about half the turkeys are marketed whole— and about two-fifths of those



have had something done to them to make cooking easier, such as prebasting. Turkey parts, relative newcomers to the meat counters, and turkey meat processed beyond the cut-up stage, account for the other half.

[Based on special material from William Cathcart, Commodity Economics Division.]

Tracing the Turkey

The turkey that graces our tables today is a bird of a different feather from the one the Pilgrims stalked in the forests.

Virtually gone from domestic production is the colorful bird of yesteryear, replaced by a snow white, highly bred species. Of course, a few farmers still raise the old fashioned kind for their own use, and one can still be won as a prize at the country "turkey shoot."

Commercial production as such dates back to the 1920's in our country, when domestic turkeys were few and expensive. These early turkeys were bred with an eye to the esthetic rather than meat quality—perfection of plumage was the goal, and some exquisite birds resulted.

By the end of the thirties, the emphasis shifted from colorful feathers to taste. One innovation occurred in the 1940's when USDA produced the "Beltsville White," a broad-breasted, smaller turkey, designed for the family table. Other similar strains were developed, and, with advances in disease control and production methods, the turkey industry entered the modern age.

Today, individual growers produce turkeys by the thousands. The white, carefully bred birds are scientifically nurtured in precisely controlled environments. From artificial incubation to the truck trip to the processing plant, they are secluded from any influences of the outside world, except glimpses of the grower as he checks his automated equipment.

A turkey's lifespan ranges from 4 to 6 months, depending on how long it takes to fatten him (a tom) to 14-25 pounds or her (a hen) to 8-16 pounds, live weight.

During this time he or she dines on such goodies as ground corn, alfalfa, fish feathers, and crab shells, with such additives as tranin, methionine, and calcium propionate, along with an occasional dose of penicillin or other medicine to ward off disease.

Turkeys are raised in every State, but some States far outproduce others. Minnesota, with over 22 million in 1975; California, with nearly 16 million; and North Carolina, with over 14 million, are unquestionably the big producers. Next in line is Texas (almost 9 million in 1975), followed by Missouri, Arkansas, Iowa, Virginia, Indiana, and Wisconsin. The remaining States produced less than 4 million turkeys apiece in 1975.

As in the case with most agricultural production, the product is not usually grown where the big demand is. For example, the New England, Middle Atlantic, and East North Central regions have steadily become less able to meet their demand for turkeys, while the other regions are basically self-sufficient or have surplus production.

If you're looking for that old fashioned bird, the wild turkey that our Pilgrim forefathers stalked, he still exists in some parts of the country—although extinct from the Pilgrim's New England haunts.

He may be found in his natural majesty today in 21 States—those South of the Ohio River, plus Pennsylvania, Maryland, Illinois, Missouri, Arkansas, Louisiana, Oklahoma, Texas, Colorado, New Mexico, and Arizona.

In some of the States he is granted sanctuary; in others, he may be legally hunted.

How Sweet It Was

The old sweet tooth just isn't what it used to be, if candy consumption statistics are any indication.

Last year we ate slightly less than 17 pounds of candy per person, down 3 pounds from 1969—a record year. Collectively, those figures add up to 3.6 billion pounds for last year, versus just over 4 billion pounds in 1969.

Why the dulling of the sweet tooth? For one thing, there has been a shift in the average age of Americans. The percentage share of young people—the big candy eaters—is declining. For another, sharply higher prices of such confectionery staples as sugar, cocoa and chocolate, and nutmeats in 1974 and 1975 boosted prices at the retail level.

Chocolate No. 1. Chocolate candy is still the American favorite. Nearly 70 percent of the confectionery produced in 1975 contained cocoa or chocolate. Of the total, over a fifth was solid chocolate, or chocolate mixed with nuts, fruits, etc.

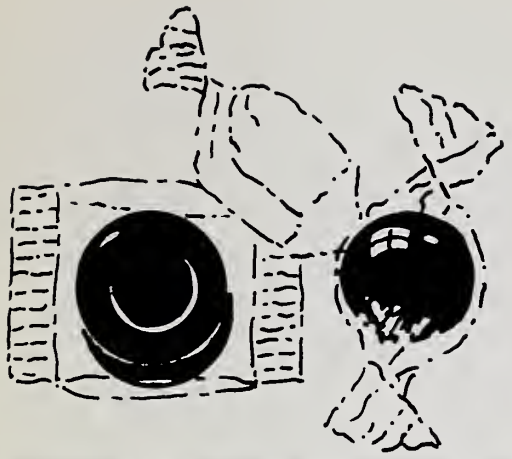
Of the nonchocolate confections, hard candy is the most popular. This type accounted for a tenth of total U.S. consumption in 1975. Other nonchocolate favorites are caramels, toffee, marshmallow confections, nougats, creams, fudge (maple, vanilla, etc.), jellies, and licorice.

And candy tastes vary somewhat throughout our country and noticeably from our European neighbors, from whom we import several specialties. For example, anise, a popular flavor in Wisconsin and Minnesota, is virtually unknown to the rest of the U.S. Similarly, New Yorkers seem to prefer a darker, bitterer chocolate than their fellow Americans.

American peanuts. Peanuts, a popular ingredient in the U.S., are literally foreign to European confectionery, which often contains filberts or burnt almonds instead. On the other hand, a favorite of the Europeans—marzipan (sweetened almond paste)—is only in lackluster demand here, overshadowed by sweetened coconut paste or peanut butter.

Nearly half the candy marketed in the U.S. is sold in packages (other than bar form). Candy bars account for another 30 percent; 5- and 10-cent specialties, a tenth; and bulk goods and penny candies, the remainder.

That's right, penny candies are still with us despite inflation—a



remarkable 2-percent share of total 1975 output.

European imports. Europe is our biggest supplier of imported candy. About half of our total imports come from the United Kingdom, with the Netherlands, Belgium, West Germany, Switzerland, Sweden, Finland, and Italy as the other major suppliers.

Except for exporting some solid sweetened chocolate bars and hard candies, European confectioners prefer to cultivate U.S. tastes for continental types of candy. Such specialties include chocolate mixed with nuts or fruit, toffee, fruit pastes, and marzipan, often in attractive packages or colorful metal containers.

In addition to European candy, we import a significant amount of confections from Canada, and to a lesser degree, from Mexico, Argentina, Brazil, and Colombia.

Bouncing trade. Our imports have bounced from a mere 51 million pounds in 1959 to a record 153 million in 1974, and down to 132 million last year. Although chocolate candy is No. 1 on the homefront, only a fifth of the imports contain any cocoa or chocolate. In fact, imports of nonchocolate candies have generally been trending upward.

While we currently export only a fourth as much candy as we import, this ratio could be changing. Reason: exports have been increasing at a faster pace.

Our three biggest markets are Canada, Japan, and Mexico, who take around three-fourths of our candy shipments. The remainder go to various countries throughout the world. Total shipments are about evenly divided between chocolate and nonchocolate varieties.

Big four producers. On the homefront, some confectionery is commercially produced in every State in the Union, but four States account for about two-thirds of the output. The "big four" are Illinois (28 percent), Pennsylvania (23), and New York and New Jersey (16 each).

Although the candy industry is a year-round enterprise, there are some seasonal forces at work. August and September deliveries are heavier as stores stock up for Halloween, and to a lesser extent, Thanksgiving and Christmas. June, on the other hand, is slow, as candy appetites appear to be at low ebb in the summer, and merchants take the opportunity to move out old stocks.

Sweetener ties. Since candy is about 80 percent sugar or other sweeteners, what happens to the confectionery industry is of import to the sweetener industry and vice versa. For example, confections are the fourth largest user of sugar, taking about a tenth of the U.S. total. They also use around a fourth of the corn sirup, and a tenth of the dextrose.

Other important ingredients are cocoa and chocolate, nuts, and fats and oils. Cocoa and chocolate's share in confections has declined since 1972, as a result of relatively high prices and limited supplies. Likewise, use of nuts (except peanuts) has been on a downturn—since 1968. Again, prices are mainly to blame.

The long-term outlook for candy is basically an extension of current trends. By 1980, per capita consumption is expected to be down some more, anywhere from a few ounces to 2.5 pounds, and both imports and exports are projected to increase.

[Based on the "The Confectionery Industry—Trends and Prospects," paper presented by Fred Gray, Commodity Economics Division, at the Retail Confectioners' International Short Course, Erie, Penn., on July 23.]

A Taste for Candy

Besides pyramids, the ancient Egyptians—at least the rich ones—had a fondness for exotic sweets.

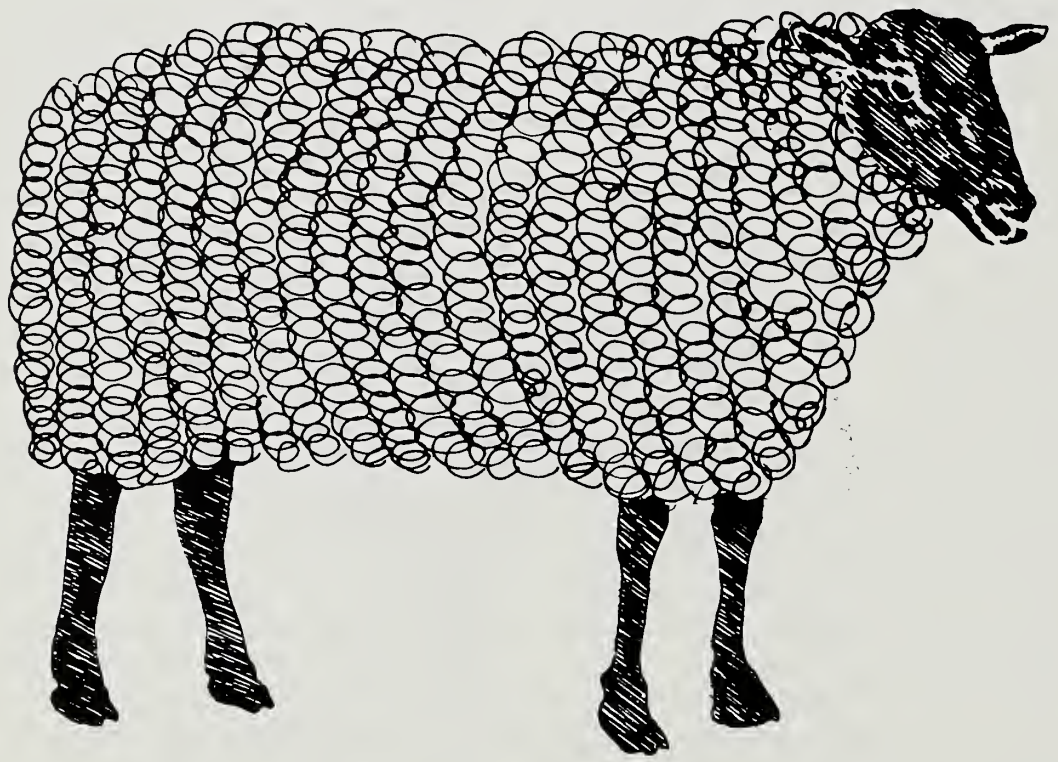
Both written and pictorial records show us that the upper crust often nibbled on honey-sweetened confections, containing figs, dates, nuts, and spices. These candies came in various shapes and were usually brightly colored.

After the ancient Egyptians, history records almost nothing about candy until the 14th century, when sugar was shipped into Venice. It then tells us that the resulting candy industry sold its wares largely to pharmacies or spice stores. And the industry remained fairly localized until sugarcane and sugarbeets spread through the world.

Confections as we know them today basically date back to the 16th century. Of course in those days, they were made by hand, where today's modern machines take over the task of cooking, molding, coating, drying, and packaging. In addition to machinery, one other major innovation hit the industry—refined white crystalline sugar in the 19th century.

Commodity Profile

A Wooly Comeback



The U.S. wool industry—which has been overshadowed by modern manmade fibers—just may be making a comeback.

Since mid-1975, when the Nation began recovering from its economic recession, the public has been buying wool clothing in larger quantities, although the market is still not what it was 25 years ago, before manmade fiber purchases began taking their toll.

Declining U.S. demand for wool over the years has contributed to a sharp reduction each year in the amount of wool produced. This year, production will be less than half what it was in 1955, and 9 percent below that in 1975.

Erratic prices. Basically, prices for wool can best be described as "erratic". Raw wool in the last 5 years has been priced at the farm from 20 cents to 83 cents per grease pound on an annual average basis. (Grease wool is that which has not had lanoline, dirt, and other foreign matter removed.)

Where the prices, and the market, will go next is difficult to determine. Last spring's recordsetting lamb prices and higher wool prices led to 15 percent fewer sheep being slaughtered in the first half of 1976 than the year before.

If the higher prices and lower slaughter levels continue for another year, the downturn in wool production may be halted.

Because of the reduced production, from 241.3 million grease pounds in 1955 to 108.4 million pounds in 1976, the value of production has dropped, from $103.3 million to $75.9 million. In 1955, 27.1 million stock sheep were in the U.S.; today there are 11.5 million.

Natural things. But the public has been coming back to wool, the same way the demand for cotton clothing has revived, and for much the same reason: People want to go back to the "natural" things. They like the look and feel of natural fibers more than manmade—even if they do cost more.

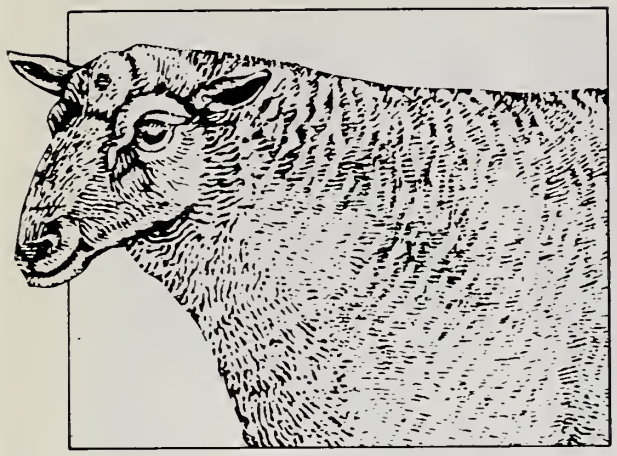
The manmade fibers have an inherent advantage in that they require only four or five processing steps to go from raw materials to yarn.

Wool requires twice that many steps. In addition, manmade fibers are not subject to the same large price variabilities that wool is. This price variability has turned out to be a major headache for the textile industry's budgeters and planners.

The cost of wool remains significantly higher than the cost of manmade fibers, despite increased oil prices, which sharply affect manufacturing costs.

Other problems. The price variability of wool, while being a problem from the standpoint of quantity selling, is far from the only problem that sheep producers have.

Sheep flocks have been damaged in the West by predators, particularly the coyote. Just how extensive the damage has been is a bone of contention between sheep raisers and the environmentalists. The farmers want to use poison—cyanide—to reduce the coyote population. They claim their losses are so high, that without effec-



tive predator control they will be forced out of business. Existing Federal regulations prohibit the use of such poisons on Federal lands, and 47 percent of the sheep in the U.S. graze on Federal land.

Coyote culprits. Sheepmen claim that attacks by coyotes have cut deeply enough into the herds to warrant the use of poisons which may strike at more than just the coyote. But they say while other animals, such as foxes and badgers, are occasionally killed, such happenings are relatively rare.

The environmentalists claim that such occurrences are not rare. They charge that the poisons are not selective enough. Also, they argue that killing off the coyote would seriously disrupt the local balance of nature.

Another industry problem is the lack of skilled labor for the sheep flocks. About a fifth of the sheepmen in the West are 60 years or older, and the younger people are simply not learning the trade. Needed are people trained in sheep herding, shearing, and management facets of the sheep business.

Changing ways. There have been some changes in the business of raising sheep, which had remained unchanged for hundreds of years. Now herders use motorized vehicles more than they used to, with some sleeping in motor homes rather than in wagons when they are herding. Also, advances in breeding techniques, testing, and feeding procedures have come with new technology.

Likewise, the wool business has changed somewhat. Manufacturers are now able to make wool clothing mothproof and machine washable, among other things, making the fiber more attractive to the consumer.

The 17 most western States in the U.S. produce about 80 percent of the sheep, even though nearly every State produces some commercial wool. Texas is the leading wool producer, accounting for 20 percent of the wool; Wyoming is next with about half that amount.

Clothing demand. The largest demand for U.S. wool is for clothing, although substantial amounts of imported wool are used for manufacture of carpeting. The apparel wool comes from a genetically improved breed of sheep, which produces a finer, softer wool than is normally used for carpeting.

All U.S. domestic wool is apparel wool; carpet wool is imported. Apparel wool mills this year will require about 110 million clean pounds. This compares with apparel wool mill consumption of 94 million pounds in 1975, and 75 million pounds in 1974.

U.S. apparel and carpet mills together will consume an estimated 125 million clean pounds of wool in 1976, compared with 110 million pounds in 1975, and 413.8 million pounds in 1955.

Important imports. Since wool production has been declining on a regular basis since 1955, this means imports have been used to make up the difference between production and total consumption. About 60-65 million clean pounds of wool will be imported in 1976, and only 1.6-2 million clean pounds will be exported. In 1974, a low of 27 million pounds was imported.

Of the 60-65 million pounds of wool imports, about 45 million pounds will be apparel wool, dutiable at 25.5 cents per pound; carpet wool imports are generally duty free.

The U.S. is not among the leading producers of wool in the world, and never has been. In 1955, the U.S. produced 6 percent of the world's wool supply. This year, the U.S. will supply only about 2 percent.

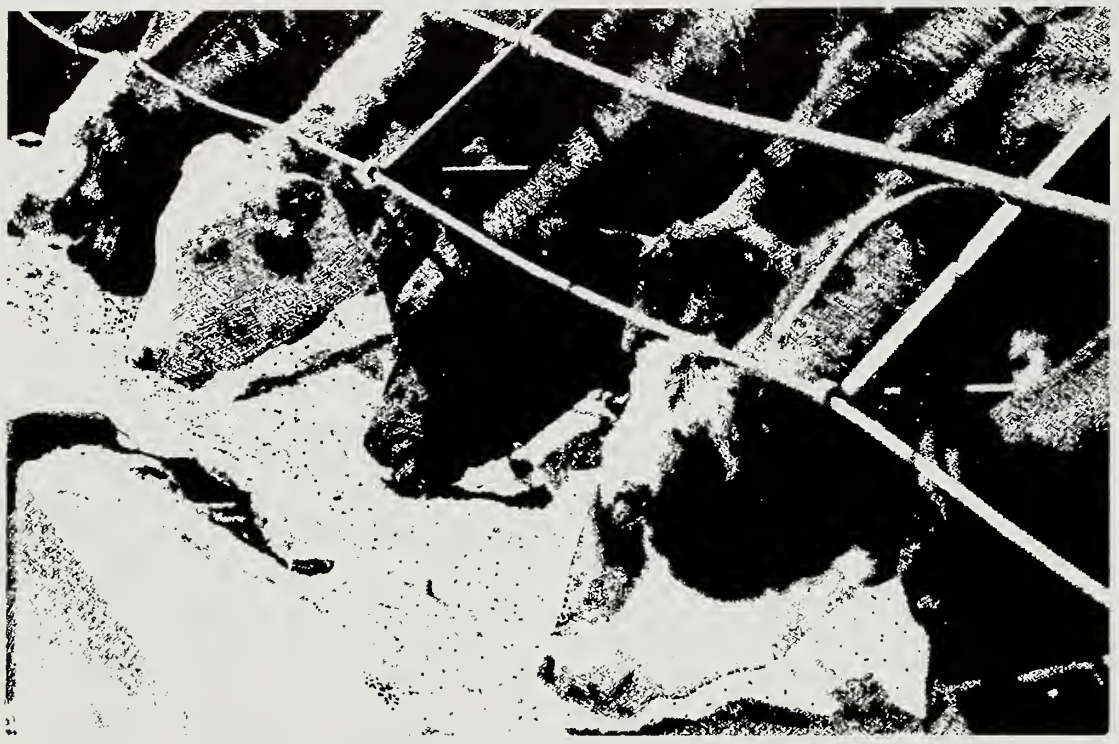
The five leading nations are Australia, the Soviet Union, New Zealand, Argentina, and South Africa. Together these countries supply 70 percent of the world's wool. Australia alone provides 30 percent, and it is Australia that will most strongly affect the U.S. price.

Foreign price supports. Price support policies of foreign governments will affect the world market, as well as world supply and demand conditions. The Australians recently increased the wool price support for 1977 and 1978 by about 14 percent over this year's support level. As a result, high wool product prices will be maintained, and domestic wool prices should be shored by the Australian action for the next 2 years.

Should the factors of greater U.S. demand and higher domestic prices for wool prove to be a long-term trend, U.S. wool producers will have a future that is less than bleak for the first time in two decades.

[Based on a background report on domestic wool production for the Senate Agriculture Committee, by Russell G. Barlowe, and Irving Starbird, Commodity Economics Division; and on "Characteristics of Sheep Production in the Western United States," by Kerry Gee, Commodity Economics Division, and Richard S. Magleby, Natural Resource Economics Division. Special material was provided by R. Samuel Evans, Commodity Economics Division.]

Feedlot Fattening: Feast or Famine Factor?



In recent years, the feedlot method of finishing cattle with feed grains has come under attack from critics who charge that cattle are competing more and more with humans for grain.

Such critics point to the feed conversion rates for beef as an example of what they contend is an inefficient system of producing food for humans—it takes 14.2 pounds of feed including pasture, measured in feed units or corn equivalents, on the average, to produce 1 pound of beef on the hoof before slaughter.

An ERS study of the comparative economics of confinement versus nonconfinement feeding arrived at these conclusions:

- Confinement feeding actually requires less feed consumption than nonconfinement feeding—30 percent less by time of slaughter.
- The feed conversion ratio is much less for confined beef—11.9 pounds of feed per live-weight pound compared with 16.5 for nonconfined beef cattle.
- Confinement is economically advantageous to both the livestock feeder and consumer.
- Much of the feed consumed, even by confined cattle, is roughage that cannot be consumed by many other livestock species and humans. In fact, half of a steer's slaughter weight is achieved prior to confinement and before concentrate feeding, and four-fifths of all feed in beef production is pasture and harvested forage.

Uniform supply. For the cattle industry, confined feeding provides a relatively uniform supply of beef to the consumer. The reason becomes apparent when a feedlot-confined slaughter steer is compared with one raised on pasture.

If a calf is born in mid-January or February, it would probably be weaned by late August, when its weight approaches 500 pounds.

A month or two later, it goes to the feedlot for 6 months of confinement feeding, during which time it eats about 3,700 pounds of feed, finally reaching a live weight of 1,000 pounds at slaughter—about 15 months after birth.

More feed and time. The range calf would require about 30 percent more feed and as much as an additional year to reach the 1,000 pounds market weight.

Thus, without calf confinement, the cattle producer's cash flow or turnover would be reduced, and the risk of death loss of the animal before slaughter would be greater during the extra year.

Even so, a cattle producer may still be tempted to gamble for a greater profit by keeping calves until they reach slaughter weight—except for some additional drawbacks.

The critical cost of feeding the calf depends on two factors: length of time on feed before slaughter, and costs of available feed. Hay and pasture are the feed staples for cow/calf operations, but to feed the entire calf crop until slaughter weight is attained could stretch roughage feed requirements beyond what could be profitably used in onfarm production, thus requiring additional "out of pocket" feed purchases.

Corn versus hay. Taking a closer look at the relative feed costs, ERS researchers used season average prices received by farmers for corn and hay. Hay, in this instance, serves as a proxy for all roughages. When hay is adjusted to nutrient values to

corn and hay prices, corn is consistently cheaper than hay on a unit basis.

Returning to the question of whether beef cattle seriously compete with humans for feed, it appears that this competition is minimal—unless humans develop a taste for range roughage.

Consumption/live-weight ratio. Average 10-year ratio of pounds of feed consumed per pound of live-weight beef for all cattle was 14.1:1. The ratio was 16.5:1 for cattle not on concentrate feed, compared with 7.4:1 for those that are.

From the time that a 500-pound calf is put on concentrate feed until slaughter, it consumes about 3,700 pounds of feed. If, instead, the calf isn't placed on concentrate feeding, it must eat 8,250 pounds of feed to reach slaughter weight.

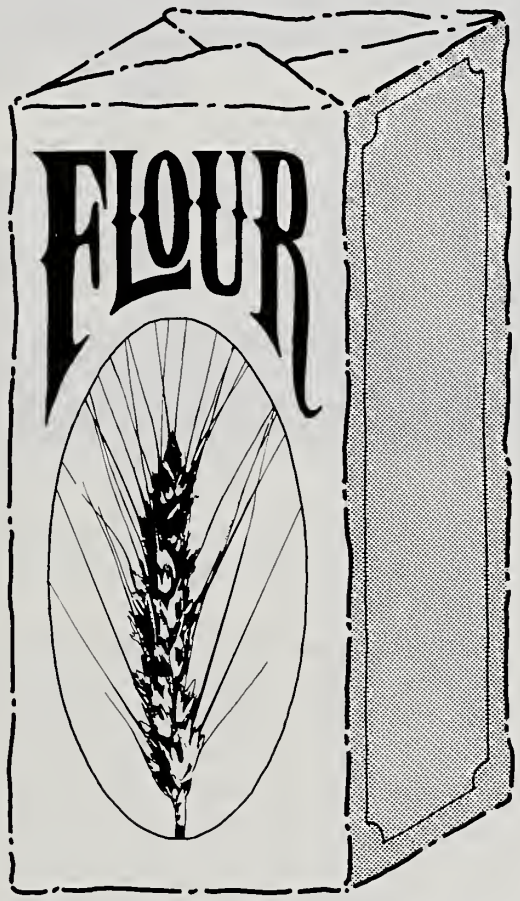
Thus, in the total feeding span, the confined animal consumes about 12,000 pounds of feed—roughage and concentrate—before slaughter, compared with 16,500 pounds for a non-confined animal—about a 30-percent difference.

In 1975/76, total feed consumption by all beef cattle was 316 million tons. Of that, 209 million tons was pasture, 62 million tons was harvested roughage, and only 45 million tons—or 14 percent of the total—was feed concentrate. These proportions have remained relatively stable in the past decade.

Producers in recent years have thus found an efficient expanded market for their calves, and consumers have benefited from larger beef supplies.

[Based on an article, "Feed Utilization for Beef Production," by George C. Allen, Commodity Economics Division.]

Flour Mills



The larger the wheat flour mill, the greater the competitive advantage over smaller mills, because of reduced operating costs per unit of production, an ERS study suggests.

In three economic models of wheat flour mill operations, a plant handling 7,000 hundredweight of flour per 24 hours invested $1.09 per hundredweight in operating costs, compared with $1.56 for a 3,000 hundredweight model—a 30-percent savings. A medium-sized model—5,000 hundredweight—had operating costs of $1.23 per hundredweight.

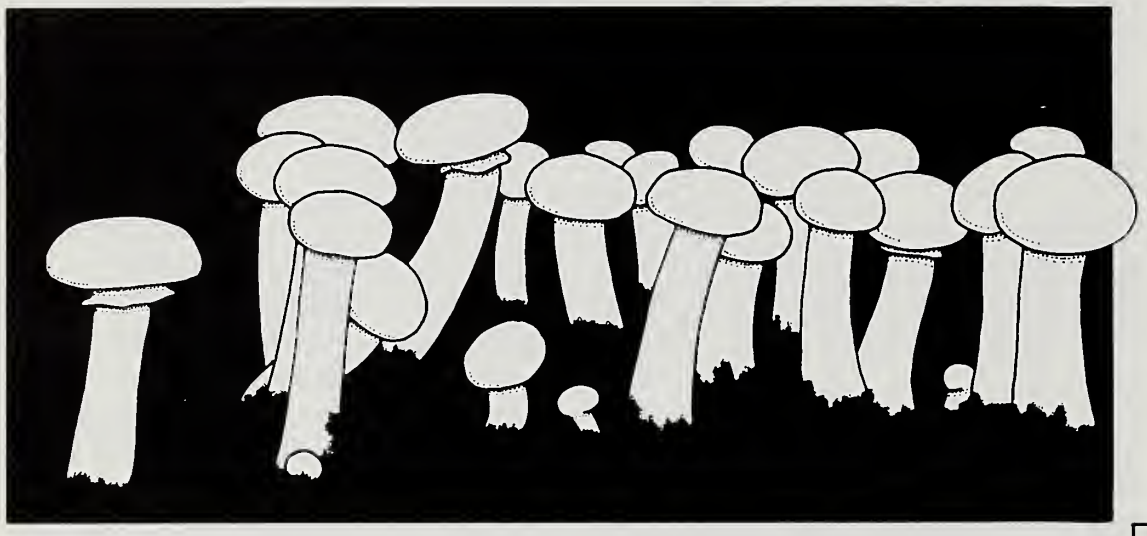
Fixed costs—such as depreciation, taxes, and interest on investment—varied from one size plant to another, as did variable costs. The latter—including wages and salaries, utilities, and maintenance on equipment and buildings—remained substantially higher than fixed costs in the three models, but their percentage of the total cost declined as the model size increased. For example, in the smallest of the models, variable costs amounted to over 62 percent of the total cost, while in the largest plant, the variable costs accounted for 60 percent of the total. Fixed costs went from 37.6 percent of the total in the 3,000-hundredweight model to nearly 40 percent of the total operating costs of the 7,000-hundredweight model.

The major portion of fixed costs is ownership costs. The initial investment in equipment, facilities, and land is spread over their estimated productive life. Depreciation is a prime example of this type of cost. It makes up the largest portion of fixed costs, and it will increase as the mill size increases; from 18.7 percent in the smallest mill, to 20.8 percent of the fixed costs in the largest mill.

In the end, it is the total cost of operations that counts, and these figures show a definite advantage for larger plants. Estimated costs declined 33 cents per hundredweight, or 21 percent, in going from the small to the medium mill, and 65 cents per hundredweight, or 30 percent, to the large size mill. However, the difference between the medium mill and the large mill amounted to only about 11 percent, with costs declining 13.5 cents per hundredweight.

[Based on "Economic Models of Flour Mills, Part II—Operating Costs," by F. F. Niernberger, Commodity Economics Division; W. D. Eustace and A. B. Ward, Kansas State University.]

The Mushroom... Food Fit for a King



Mushroom lovers may be cringing over the high cost of their favorite tidbits, but they're better off than their ancient ancestors who might never have even tasted one.

In ancient civilizations, the mushroom was prized as a great culinary delicacy fit only for the mouths of the upper classes. Julius Caesar, for example, passed stringent laws specifying who might enjoy them and who might not. Today, fortunately, anyone with a taste for great food—and a willingness to pay—can delight in this delicate vegetable.

Domestic production up. U.S. mushroom production has been increasing at a steady rate, reaching a record of almost 310 million pounds this season—up 4 percent from the 1974-75 crop and 11 percent from 1973-74's.

Growers used nearly 115 million square feet of bed and tray area to produce this season's bumper crop, 3 percent more than the previous year. Production area in 1976-77 could rise an additional 10 percent. This season's average yield of 2.7 pounds per square foot was the same as for the 1974-75 crop.

Grower prices. Even with the increased output, prices to growers for clean, cut processing stock averaged about 62 cents per pound this season, up from a little over 49 cents a year ago. Fresh market prices were almost 72 cents a pound, about 11 cents more than last year.

Prices differ from one locality to another and from one season to the next—conditions usually beyond the grower's control. Because mushrooms are highly perishable, they must be sent to market on the day they're harvested. If not, the grower has to provide expensive refrigeration. Under optimum conditions, mushrooms will not keep fresh more than a week after harvest.

More fresh sales. Although most mushrooms produced in the U.S. continue to be processed, fresh sales are steadily closing the gap. For example, in 1970-71, only 29 percent of the total crop were fresh market, while 71 percent were processed. This year the figures were 46 and 54 percent, respectively.

Virtually all of the fresh market and most of the canned mushrooms sold to U.S. consumers are produced domestically—no domestic mushrooms are exported. However, recent imports of processed and dried mushrooms—from Taiwan, South Korea, France, and Japan—have increased sharply, causing concern within the domestic industry.

[Based on special material from Charles Porter, Commodity Economics Division.]

To Eat or Not To Eat

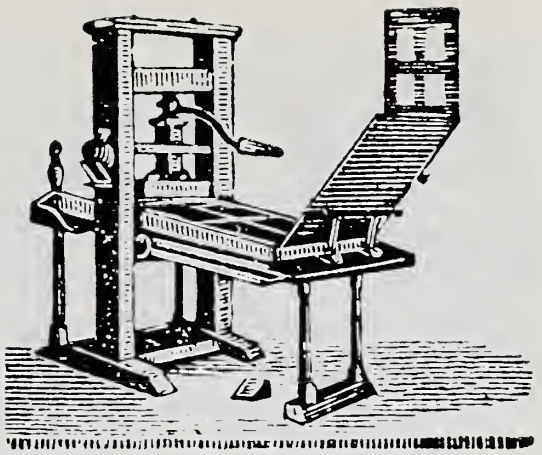
Better think twice before eating wild mushrooms, since most people can't tell the difference between the good kind and the poisonous variety—commonly known as toadstools. The best advice is to rely on commercially cultivated mushrooms, which are always safe.

U.S. mushrooms are grown above ground in specially constructed buildings equipped with heating, air-conditioning, and ventilation. Today's sterile conditions are a far cry from early cultivations, where mushroom beds were often infested with diseases and insects.

The first record of mushroom cultivation dates back to the reign of Louis XIV of France. French mushrooms were grown in underground caves, and the business grew until in 1827 a cave in Mery was said to contain 21 miles of beds producing 3,000 pounds of mushrooms daily.

From France, the mushroom industry spread to England and other countries. Mushrooms were grown commercially in the U.S. as far back as 1864, with New York City being the center of activity.

Recent Publications



Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1664–So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

U.S. Fats and Oils Statistics 1960-75. Ralph Mullins, Commodity Economics Division. Statis. Bul. 560.

A comprehensive series of conversion factors and domestic statistics on oilseeds, fats, oils, and their products are incorporated in one book. The salient statistics appearing regularly in the *Fats and Oils Situation* are complemented in this handbook, which includes data covering U.S. supply, disappearance, utilization, foreign trade, and prices of fats and oils, as compiled for many years by USDA.

Economic Effects of Federal Contributions to the U.S. School Lunch Program, Calendar Year 1972 and Fiscal Year 1974. Paul E. Nelson, Jr., and John Perrin, National Economic Analysis Division. AER-350.

This report uses input-output analyses to quantify the economic effects of Federal contributions to the School Lunch Program for calendar year 1972 and fiscal year 1974. It also compares these economic effects with those that would have occurred if other program options had been used.

Social and Economic Characteristics of Spanish-Origin Hired Farmworkers in 1973. Leslie Whitener Smith, Economic Development Division. AER-349.

Contrary to popular belief, only a small proportion of the Nation's hired farmworkers are of Spanish origin; but, these workers depend heavily on agriculture as their major source of income. Their alternatives to farmwork are few, and because of the combined factors of limited alternatives, large families, poor education, and other problems, incomes of Spanish-origin farmworkers are generally lower overall than those of Anglo farmworkers.

Farm Expenditures and Their Financing in 1970. Dorwin Williams, National Economic Analysis Division. AER-340.

In 1970, farm operators borrowed an estimated $16.7 billion, according to this report. Two-thirds of this amount was borrowed for a term of less than 12 months, and most of the borrowings were used for operating expenses, even though more than half of the reporting farm operators made capital purchases.

Economics of Agriculture, Reports and Publications Issued or Sponsored by USDA's Economic Research Service. Supplement No. 7 to ERS-368.

This listing of ERS publications includes those issued between July 1974 and June 1975. The listing includes citations for all published material of more than temporary interest, regardless of the form the publication took.

Supply and Demand for Agricultural Products in Indonesia, 1975-85. E. Wayne Denney, Foreign Demand and Competition Division. FAER No. 126.

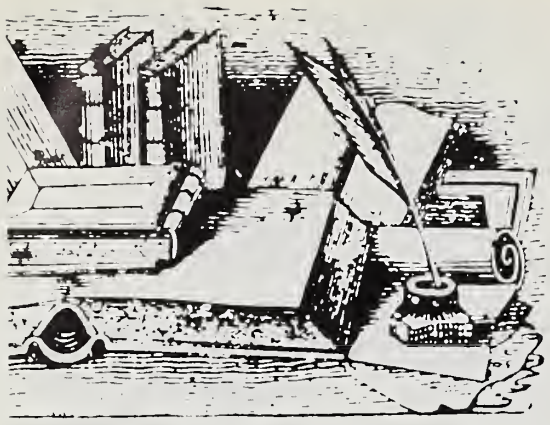
Indonesia's import requirements and export potential for major agricultural commodities through 1985 are projected. The high and low forecast levels for each trade product are accompanied by analyses of the country's economy.

Agricultural Economics Research, Vol. 28, No. 3. Edited by Judith A. Armstrong, Information Division, and Clark Edwards, Economic Development Division.

The third quarter of this journal of economic and statistical research in USDA includes three articles concerning gains and losses associated with foreign trade of agricultural commodities. The articles contain discussions of currency devaluation and fluctuating exchange rates, and their effects on agricultural trade. In addition, one article presents a model of the world grain-oilseed-livestock economy (GOL) used for ERS projections.

Use of Land Reserves to Control Agricultural Production. Milton Erickson, Commodity Economics Division. ERS-635.

Land reserve programs existing between 1956 and 1973, designed to reduce crop supplies through reduced acreage, have had a 50-60 percent effectiveness. This report discusses existing programs and their problems, especially the one of slippage, and offers alternatives for the future.



Progress of Selected Florida and Georgia Families in the Expanded Food and Nutrition Education Program. J. Gerald Feaster and Garey B. Perkins, National Economic Analysis Division. ERS-636.

Between 7 and 21 percent of the homemakers who finished the Expanded Food and Nutrition Education Program in certain counties in Georgia and Florida have good overall diets as a result of their participation. Many homemakers do not finish the program, however. Those who left before termination generally were younger, better educated, had higher family incomes, and spent more money for food than those who stayed with the program.

Indices of Agricultural Production in Africa and the Near East. Foreign Demand and Competition Division. Statis. Bul. 556.

Continuing the assessment of the world agriculture situation, this book updates data published in a June 1975 ERS book of the same nature, Statis. Bul. 544. Because of significant changes in historical data for some countries, indices now cover 20-year periods, rather than 10-year periods. Included are tables showing the relative agricultural output of each country in Africa and the Near East, including all major cash crops and their market prices.

Development and Spread of High Yielding Varieties of Wheat and Rice in the Less Developed Nations. Dana G. Dalrymple, Foreign Development Division, in cooperation with the U.S. Agency for International Development. FAER-95.

The use of high-yielding varieties of wheat and rice has expanded sharply in the developing nations in recent years. This report, in its fifth edition, reviews the development of these varieties and documents their yearly spread in statistical terms. Major emphasis is placed on semi-dwarf wheat and rice varieties.

Impacts of Reverting to Basic Legislation When the Agriculture and Consumer Protection Act of 1973 and Rice Production Act of 1975 Expire. J. B. Penn and W. H. Brown, Commodity Economics Division. ERS-641.

At the end of the 1977 crop year both the Agriculture and Consumer Protection Act of 1973 and the Rice Production Act of 1975 will expire, unless Congress votes extensions or new legislation. As the acts expire, so will a series of programs and provisions. Others will continue, but in changed form. Effects of the expirations on various commodities—wheat, feed grains, cotton, soybeans, rice, and dairy products—are studied.

Economic Effects of the U.S. Food Stamp Program—Calendar Year 1972 and Fiscal Year 1974. Paul E. Nelson, Jr., and John Perrin, National Economic Analysis Division. AER-331.

An input-output model was used to determine the economic impact of bonus food stamps on households already using stamps. In addition, the impact of the bonus stamp provision was compared with the alternative of giving participants an equal amount of cash. Changes in business receipts, gross national product, and jobs measured the impact of stamps and cash usage. In each case, Federal personal income taxes were raised and taxpayers' expenditures reduced prior to giving cash or stamps to participants.

Home Grown Fruits and Vegetables and Their Use. Evelyn F. Kaitz and Jon P. Weimer, National Economic Analysis Division. TVS-201, reprinted from *Vegetable Situation,* August, 1976.

Nearly half of all respondents in a recent ERS survey had home gardens, largely due to rising food prices, the preference for the taste of fresh fruits and vegetables, and a growing interest in gardening as a hobby. The most popular vegetable for growing was the tomato, followed by beans of all kinds, cucumbers, peppers, radishes, and scallions.

Characteristics of Sheep Production in the Western United States. C. Kerry Gee and Richard S. Magleby, Natural Resource Economics Division. AER-345.

Two sample surveys undertaken in 17 western States gathered data on commercial sheep operations. According to the survey findings, 80 percent of all sheep raised in the U.S. grazed in these western States. About half of the grazing areas are Federal ranges. As sheep production continues to decline and as older sheep producers retire, more incentives are needed to encourage new sheep operations in these States.

Economic Trends

[1]Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2]Average annual quantities of farm food products purchased by urban wage earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. [3]Annual and quarterly data are on 50-State basis. [4]Annual rates seasonally adjusted third quarter. [5]Seasonally adjusted. [6]As of March 1, 1967. [7]As of March 1, 1975. [8]As of November 1, 1975. [9]Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Source: U.S. Dept. of Agriculture (Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale and Consumer Price Index).

Item	Unit or Base Period	1967	1975 Year	1975 Sept.	1976 July	1976 Aug.	1976 Sept.
Prices:							
Prices received by farmers	1967=100	—	186	199	195	187	186
Crops	1967=100	—	201	210	215	201	204
Livestock and products	1967=100	—	172	189	179	175	172
Prices paid, interest, taxes, and wage rates	1967=100	—	181	186	196	195	195
Family living items	1967=100	—	166	169	177	177	178
Production items	1967=100	—	182	189	199	198	197
Ratio[1]	1967=100	—	102	107	99	96	95
Wholesale prices, all commodities	1967=100	—	174.9	177.7	184.3	183.7	184.7
Industrial commodities	1967=100	—	171.5	173.1	182.6	183.6	184.7
Farm products	1967=100	—	186.7	197.1	196.9	189.3	191.8
Processed foods and feeds	1967=100	—	182.6	186.1	182.6	176.8	177.1
Consumer price index, all items	1967=100	—	161.2	163.6	171.1	171.9	—
Food	1967=100	—	175.4	177.8	182.1	182.4	—
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	173.6	176.4	176.8	176.5	—
Farm value	1967=100	—	187.0	202.9	182.3	178.9	—
Farm-retail spread	1967=100	—	165.3	159.6	172.7	175.0	—
Farmers' share of retail cost	Percent	—	42	45	40	39	—
Farm Income: [3]							
Volume of farm marketings	1967=100	—	115	131	116	119	137
Cash receipts from farm marketings	Million dollars	42,817	89,563	8,919	7,839	7,593	8,700
Crops	Million dollars	18,434	46,661	6,865	4,030	3,739	4,500
Livestock and products	Million dollars	24,383	42,902	4,054	3,809	3,854	4,200
Realized gross income [4]	Billion dollars	49.9	98.2	105.2	—	—	104.8
Farm production expenses [4]	Billion dollars	38.2	75.5	76.8	—	—	81.2
Realized net income [4]	Billion dollars	11.7	22.7	28.4	—	—	23.6
Agricultural Trade:							
Agricultural exports	Million dollars	6,380	21,894	1,610	1,799	1,760	—
Agricultural imports	Million dollars	4,452	9,328	945	958	932	—
Land Values:							
Average value per acre	Dollars	[6]168	[7]354	—	—	—	[8]381
Total value of farm real estate	Billion dollars	[6]181.9	[7]370	—	—	—	[8]398
Gross National Product: [4]	Billion dollars	796.3	1,516.3	1,548.7	—	—	—
Consumption	Billion dollars	490.4	973.2	987.3	—	—	—
Investment	Billion dollars	120.8	183.7	196.7	—	—	—
Government expenditures	Billion dollars	180.2	339.0	343.2	—	—	—
Net exports	Billion dollars	4.9	20.5	21.4	—	—	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	626.6	1,249.7	1,277.1	1,383.4	1,389.5	—
Total retail sales, monthly rate	Million dollars	26,151	48,702	49,644	53,754	54,528	54,593
Retail sales of food group, monthly rate	Million dollars	5,759	10,977	11,137	11,614	11,747	11,884
Employment and Wages: [5]							
Total civilian employment	Millions	74.4	[9]84.8	[9]85.2	[9]87.9	[9]88.1	[9]87.8
Agricultural	Millions	3.8	[9]3.4	[9]3.5	[9]3.3	[9]3.4	[9]3.3
Rate of unemployment	Percent	3.8	8.5	8.6	7.8	7.9	7.8
Workweek in manufacturing	Hours	40.6	39.4	39.8	40.2	39.9	39.6
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.81	4.89	5.20	5.21	5.30
Industrial Production: [5]	1967=100	—	117.8	122.1	130.7	131.4	—
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	82,724	86,200	93,912	94,483	—
Total inventories, book value end of month	Million dollars	84,655	146,574	146,413	151,824	152,745	—
Total new orders, monthly rate	Million dollars	46,763	86,754	85,482	94,803	93,999	—

9420 AEMEDE600A122 18038 0001
AGRL ECON MKTG ECON DIV ERS
USDA
600 MERMAID LANE E
PHILADELPHIA PA 19118